



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/523,779	02/08/2005	Marc Kluge	028987.55239US	5707

23911 7590 11/08/2006

CROWELL & MORING LLP  
INTELLECTUAL PROPERTY GROUP  
P.O. BOX 14300  
WASHINGTON, DC 20044-4300

EXAMINER

LE, DAVID D

ART UNIT

PAPER NUMBER

3681

DATE MAILED: 11/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/523,779

Applicant(s)

KLUGE, MARC

Examiner

David D. Le

Art Unit

3681

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 11-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 February 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>02/08/05</u> . | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. This is the first Office action on the merits of Application No. 10/523,779, filed on 08 February 2005. Claims 11-21 are pending.

#### Documents

2. The following documents have been received and filed as part of the patent application:
- Foreign Priority Document, received on 02/08/05
  - Information Disclosure Statement, received on 02/08/05

#### Drawings

3. The Figure 1 is objected to under 37 CFR 1.83(a) because it fails to show the rotatable connections between the forward gears G1 to G7 and the reverse gear R and the corresponding input shafts 2 and 4. Figure 1 presently shows the forward gears G1 to G7 and the reverse gear R fixedly connected to the corresponding input shafts 2 and 4, which presently renders the transmission inoperative (see paragraph [0030] of the present specification). Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the

Art Unit: 3681

remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the control cable and the disconnect-type clutch or the two input clutches must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet"

pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Objections***

5. Claim 1 is objected to because of the following informalities:

- Line 8, “a common selector control” should be --a common selector control system--.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. **Claims 11-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

**Claim 11:**

- Line 2 recites the limitation “a disconnect-type clutch”. It is unclear which specific type of a clutch that claim 11 is referring to. For the purpose of applying the art rejection, examiner interprets the limitation “a disconnect-type clutch” as one of the two input clutches that is disposed between the engine and the transmission.

Art Unit: 3681

- Line 3 recites the limitation “clutches”. It is unclear whether this newly recited “clutches” includes the disconnect-type clutch, which is first recited on line 2 of the claim. For the purpose of applying the art rejection, examiner interprets the limitation “clutches” as the synchronizing clutches (S1-S4), which do not include the dual/two input clutches.
- Line 7 recites the limitation “a dual clutch gear set”. It is unclear whether the claim is referring to a dual input clutch type transmission gear set or the gears that are located either side of clutches S1-S4. For the purpose of applying the below art rejection, examiner interprets the limitation “a dual clutch gear set” as a transmission having dual/two input clutches, consisting with paragraph [0030] of the present specification.

*Claim 12:*

- Line 2 recites the limitation “a control cable”. It is unclear whether this newly recited “a control cable” is different from the one, which is first recited on line 5 of claim 11.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**9. Claim 11 is rejected under 35 U.S.C. 102(b) as being anticipated by U. S. Patent No. 6,286,381 to Reed Jr. et al.**

*Claim 11:*

Reed (i.e., Figs. 1-7; column 1, line 27 – column 7, line 33) discloses a transmission comprising:

- An internal combustion engine (i.e., column 4, lines 22-23);
- A first friction clutch (i.e., Fig. 1, element 22);
- A second friction clutch (i.e., Fig. 1, element 20);
- A plurality of synchronizing clutches (i.e., Fig. 1, elements 38, 40, 48 and 50);
- First and second input shafts (i.e., Fig. 1, elements 16 and 14, respectively);
- A driven shaft (i.e., Fig. 1, element 18);
- A plurality of drive gears (i.e., Fig. 1, elements 30, 32, 34, 36, 42, 44, 46)  
rotatably arranged on the first and second input shafts;
- A plurality of driven gears (i.e., Fig. 1, elements 76, 78, 80, 82, 84, 86, 88) fixedly  
arranged on the driven shaft;
- At least a gearshift linkage arrangement (i.e., Fig. 2) for effecting gear change;
- Wherein even gears and odd gears are arranged side by side (i.e., Fig. 1);
- A first shifter shaft (i.e., Fig. 2, element 220);
- A second shifter shaft (i.e., Fig. 2, element 222);
- A common selector control system (i.e., Fig. 7, being the vehicle shift lever  
system);

Art Unit: 3681

- A shift control system (i.e., Figs. 2-4);
- An H-shift pattern (i.e., column 1, line 28);
- Wherein the shifter shafts are operable via at least one of the common selector control system and the gearshift control system to implement the H-shift pattern for actuating the synchronizing clutches of the even and odd gears.

***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. **Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reed Jr. et al. in view of U. S. Patent Application Publication No. US 2006/0150761 to Beer et al.**

**Note:**

- Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.
- It should be noticed that the foreign application priority document DE 102 53 471.3 of Beer et al. was filed on 16 November 2002, not 16 November 2003, as shown on the front page of the Beer et al. reference.



Claims 14 and 15:

**Reed** discloses the limitations as set forth in paragraph 9 above. Regarding claims 14 and 15 Reed lacks:

- Wherein shift fingers on the shift shafts interact with shift openings of shift plates connected, respectively, to a shift fork such that rotary motion of the shifter shafts is converted into a linear motion of the selected shift plate for shift fork;
- Wherein the shift plates each have two opposite located shift openings; and
- Wherein the shift fingers for a shift plate are axially and radially offset 180 degrees relative to each other.

**Beer** (i.e., Figs. 2 and 4-6; paragraphs [0061] to [0086]), on the other hand, teaches a shifting device for a dual input clutch transmission comprising:

- Shift fingers (i.e., Fig. 4, elements 2-8) on a shift shaft (i.e., Fig. 4, element 1) interacting with shift openings of shift plates (i.e., Fig. 4, elements 14-17) connected, respectively, to a shift fork (i.e., Fig. 4, being one of elements 10-13 and 56-59) such that rotary motion of the shifter shaft is converted into a linear motion of the selected shift plate for shift fork;
- Wherein the shift plates each have two opposite located shift openings (i.e., Fig. 5, elements 9 and 9a); and
- Wherein the shift fingers for a shift plate are axially and radially offset 180 degrees relative to each other (i.e., Fig. 6).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Reed such that the shift shafts include shift fingers interacting with shift plates and the shift fingers are arranged axially and radially offset 180 degrees relative to each other, in view of Beer, in order to perform loads shifts in a dual clutch transmission without interrupting the traction force (i.e., Bear, paragraph [0069]).

**12. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Reed Jr. et al. in view of U. S. Patent No. 4,335,623 to Kronstadt.**

Claim 20:

*Reed* discloses the limitations as set forth in paragraph 9 above. Regarding claims 20 and 21 *Reed* lacks:

- Wherein a locking shaft is associated with each of the shifter shafts, is axially guided via respective shifter shaft and has a locking structure for non-selected ones of the shift forks; and
- Wherein the locking shaft includes locking pins, which engage in locking grooves of shift plates of the non-selected shift forks.

Kronstadt (i.e., Figs. 1-4; column 3, line 54 – column 5, line 62), on the other hand, teaches a shift control mechanism comprising:

- A locking shaft (i.e., Fig. 4, element 92) associated with a shifter shaft (i.e., Fig. 4, element 48); and

- Wherein the locking shat (92) is axially guided via the shifter shaft (48) and has a locking structure (i.e., Fig. 4, elements 82, 84, 86, 88 and 90) for non-selected ones of the shift forks (i.e., column 5, lines 54-62).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Reed to include a locking shaft associated with each of the shifter shafts, in view of Kronstadt, in order to prevent inadvertent selection of more than one gear ratio at a time (i.e., Kronstadt, column 2, lines 56-68).

#### ***Allowable Subject Matter***

13. Claims 12, 13, 16-19 and 21 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

#### ***Conclusion***

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Ebenhoch et al. (U. S. Patent Application Publication No. US 2006/0117892) teaches a shifting device, as shown in Fig. 3.
- Gumpoltsberger et al. (U. S. Patent Application Publication No. US 2004/0093972) teaches a dual clutch transmission, as shown in Fig. 1.

Art Unit: 3681

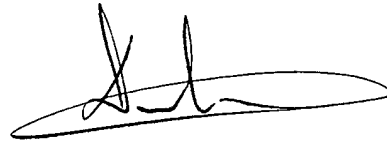
- Kidokoro et al. (U. S. Patent No. 6,422,107) teaches a transmission breather system having a shifting mechanism, as shown in Fig. 3.
- Malott (U. S. Patent No. 4,432,251) teaches a manual shift transmission, as shown in Fig. 1.
- Wolfe (U. S. Patent No. 4,170,148) teaches a speed change transmission having a gear shifting mechanism, as shown in Fig. 3.
- Morrison (U. S. Patent No. 3,857,299) teaches a control mechanism for a gearbox, as shown in Fig. 2.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David D. Le whose telephone number is 571-272-7092. The examiner can normally be reached on Mon-Fri (0700-1530).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles A. Marmor can be reached on 571-272-7095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3681

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'David D. Le', enclosed within a large, horizontal oval shape.

David D. Le  
Examiner  
Art Unit 3681  
11/06/06

ddl